Z97M KILLER Series

Intel® Z97 Chipset

FATAL1TY GAMING GEAR

Product Brief

- ASRock Super Alloy
  XXL Aluminum Alloy Heatsink
  Premium Alloy Choke
  NexFET™ MOSFET
  12K Platinum Caps
  Sapphire Black PCB
- Gaming Armor
  CPU Power - Hi-Density Power Connector
  Memory - NexFET™ MOSFET + 15µ Gold Contact in DIMM Slots
  VGA Card - 15µ Gold Contact in VGA PCIe Slot, PCIe Power Connector
  Internet - Qualcomm® Atheros® Killer™ LAN
  Cooling - XXL Aluminum Alloy Heatsink
  Audio - Purity Sound™ 2
- Supports 5th Generation, New 4th and 4th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processors (Socket 1150)
- Supports Dual Channel DDR3 3300+(OC)
- 2 PCIe 3.0 x16, 1 PCIe 2.0 x16, 1 PCIe 2.0 x1
- Supports AMD Quad CrossFireX™ and NVIDIA® Quad SLI™
- Graphics Output Options: D-Sub, DVI-D, HDMI
- 7.1 CH HD Audio with Content Protection (Realtek ALC1150 Audio Codec), Supports Purity Sound™ 2 & DTS Connect
- Qualcomm® Atheros® Killer™ LAN
- 1 SATA Express, 6 SATA3, 1 eSATA, 1 M.2 (Gen2 x2/SATA), 6 USB 3.0 (2 Front, 4 Rear), 8 USB 2.0 (4 Front, 3 Rear, 1 Fatal1ty Mouse Port)
- 1 COM Port Header, 1 Thunderbolt AIC Connector
- Supports ASRock HDD Saver Technology, Full Spike Protection, ASRock Cloud, APP Shop, F-Stream, Key Master, Full HD UEFI

Gaming Armor

Detail Specification

Platform	- Micro ATX Form Factor - High Density Glass Fabric PCB

Unique Feature	ASRock Super Alloy
	  - XXL Aluminum Alloy Heatsink
	  - Premium Alloy Choke (Reduces 70% core loss compared to iron powder choke)
	  - NexFET™ MOSFET
	  - Nichicon 12K Platinum Caps (100% Japan made high quality conductive polymer capacitors)
	  - Sapphire Black PCB
	ASRock Full Spike Protection
	ASRock Cloud
	ASRock APP Shop

Gaming Armor	CPU Power
	  - Hi-Density Power Connector
	Memory
	  - NexFET™ MOSFET
	  - 15µ Gold Contact in DIMM Slots
	VGA Card
	  - 15µ Gold Contact in VGA PCIe Slot (PCIE1)
	  - PCIe Power Connector
	Internet
	  - Qualcomm® Atheros® Killer™ LAN
	Cooling
	  - XXL Aluminum Alloy Heatsink
	Audio
	  - Purity Sound™ 2

CPU	- Supports 5th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processors (Socket 1150) - Supports New 4th and 4th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium®/Celeron® Processors (Socket 1150) - Digi Power design - 8 Power Phase design - Supports Intel® Turbo Boost 2.0 Technology - Supports Intel® K-Series unlocked CPUs - Supports ASRock BCLK Full-range Overclocking
Chipset	- Intel® Z97
Memory	- Dual Channel DDR3 Memory Technology - 4 x DDR3 DIMM Slots - Supports DDR3 3300+(OC)/2933(OC)/2800(OC)/2400(OC)/2133(OC)/1866(OC)/1600/1333/1066 non-ECC, un-buffered memory - Max. capacity of system memory: 32GB - Supports Intel® Extreme Memory Profile (XMP) 1.3 / 1.2
Expansion Slot	- 2 x PCI Express 3.0 x16 Slots (PCIE1/PCIE3: single at x16 (PCIE1); dual at x8 (PCIE1) / x8 (PCIE3)) - 1 x PCI Express 2.0 x16 Slot (PCIE4: x4 mode) - 1 x PCI Express 2.0 x1 Slot - Supports AMD Quad CrossFireX™ and CrossFireX™ - Supports NVIDIA® Quad SLI™ and SLI™
Graphics	* Intel® HD Graphics Built-in Visuals and the VGA outputs can be supported only with processors which are GPU integrated. - Supports Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video with AVC, MVC (S3D) and MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 - Pixel Shader 5.0, DirectX 11.1 - Max. shared memory 1792MB - Three graphics output options: D-Sub, DVI-D and HDMI - Supports Triple Monitor - Supports HDMI with max. resolution up to 4K x 2K (4096x2304) @ 24Hz - Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz - Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz - Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI Port (Compliant HDMI monitor is required) - Supports HDCP with DVI-D and HDMI Ports - Supports Full HD 1080p Blu-ray (BD) playback with DVI-D and HDMI Ports

Audio	- 7.1 CH HD Audio with Content Protection (Realtek ALC1150 Audio Codec)
	- Premium Blu-ray Audio support
	- Supports Surge Protection (ASRock Full Spike Protection)
	- Supports Purity Sound™ 2
	  - Nichicon Fine Gold Series Audio Caps
	  - 115dB SNR DAC with Differential Amplifier
	  - TI® NE5532 Premium Headset Amplifier (Supports up to 600 Ohm headsets)
	  - Direct Drive Technology
	  - EMI Shielding Cover
	  - PCB Isolate Shielding
	- Supports DTS Connect

LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Qualcomm® Atheros® Killer™ E2200 Series - Supports Qualcomm® Atheros® Security Wake On Internet Technology - Supports Wake-On-LAN - Supports Lightning/ESD Protection (ASRock Full Spike Protection) - Supports Energy Efficient Ethernet 802.3az - Supports PXE
Rear Panel I/O	- 1 x PS/2 Mouse/Keyboard Port - 1 x D-Sub Port - 1 x DVI-D Port - 1 x HDMI Port - 1 x Optical SPDIF Out Port - 1 x eSATA Connector - 3 x USB 2.0 Ports (Supports ESD Protection (ASRock Full Spike Protection)) - 1 x Fatal1ty Mouse Port (USB 2.0) (Supports ESD Protection (ASRock Full Spike Protection)) - 4 x USB 3.0 Ports (Supports ESD Protection (ASRock Full Spike Protection)) - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - HD Audio Jacks: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
Storage	- 6 x SATA3 6.0 Gb/s Connectors, support RAID (RAID 0, RAID 1, RAID 5, RAID 10, Intel Rapid Storage Technology 13 and Intel Smart Response Technology), NCQ, AHCI and Hot Plug (SATA3_1 connector is shared with the eSATA port) - 1 x SATA Express 10 Gb/s Connector (shared with SATA3_4, SATA3_5 and M.2 Socket) * Support to be announced - 1 x eSATA Connector, supports RAID (RAID 0, RAID 1, RAID 5, RAID 10, Intel Rapid Storage Technology 13 and Intel Smart Response Technology), NCQ, AHCI and Hot Plug - 1 x M.2_SSD (NGFF) Socket 3, supports M.2 SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen2 x2 (10 Gb/s)
Connector	- 1 x COM Port Header - 1 x Chassis Intrusion Header - 1 x TPM Header - 1 x Power LED header - 2 x CPU Fan Connectors (1 x 4-pin, 1 x 3-pin) - 2 x Chassis Fan Connectors (1 x 4-pin, 1 x 3-pin) - 1 x Power Fan Connector (3-pin) - 1 x 24 pin ATX Power Connector - 1 x 8 pin 12V Power Connector (Hi-Density Power Connector) - 1 x PCIe Power Connector - 1 x Front Panel Audio Connector - 1 x Thunderbolt AIC Connector - 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection (ASRock Full Spike Protection)) - 1 x USB 3.0 Header (Supports 2 USB 3.0 ports) (Supports ESD Protection (ASRock Full Spike Protection))
BIOS Feature	- 64Mb AMI UEFI Legal BIOS with multilingual GUI support - ACPI 1.1 Compliant wake up events - SMBIOS 2.3.1 support - CPU, DRAM, PCH 1.05V, PCH 1.5V Voltage multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), Google Chrome Browser and Toolbar, Start8 (30 days trial), Orbweb.ME Professional (Win 8.1 / 7), Xsplit, Killer Network Manager
Software and UEFI	**Software** - ASRock F-Stream - ASRock Disk Health Report - ASRock USB Key - ASRock Key Master - ASRock APP Charger - ASRock XFast RAM - ASRock Restart to UEFI **UEFI** - ASRock Full HD UEFI - ASRock My Favorites in UEFI - ASRock UEFI Guide - ASRock Instant Flash - ASRock Internet Flash - ASRock Crashless BIOS - ASRock OMG (Online Management Guard) - ASRock UEFI System Browser - ASRock UEFI Tech Service - ASRock Dehumidifier - ASRock Easy RAID Installer - ASRock Easy Driver Installer
Hardware Monitor	- CPU/Chassis temperature sensing - CPU/Chassis/Power Fan Tachometer - CPU/Chassis Quiet Fan (Auto adjust chassis fan speed by CPU temperature) - CPU/Chassis Fan multi-speed control - CASE OPEN detection - Voltage monitoring: +12V, +5V, +3.3V, CPU Vcore
OS	- Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 8 32-bit / 8 64-bit / 7 32-bit / 7 64-bit
Certifications	- FCC, CE, WHQL - ErP/EuP ready (ErP/EuP ready power supply is required)
Accessories	- 1 x ASRock SLI_Bridge_Card - Quick Installation Guide, Support CD, I/O Shield - 2 x SATA Data Cables - 1 x Screw for M.2_SSD (NGFF) Socket 3

Killer E2200 GAME NETWORKING

NO LAG, JUST FRAG!

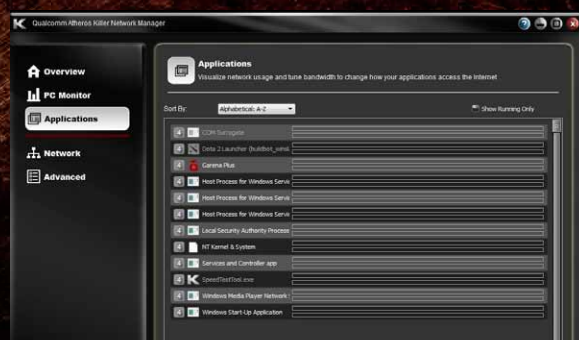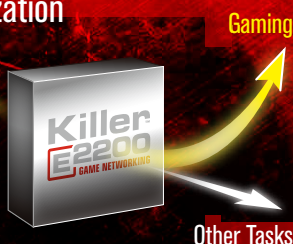## FAST Networking Performance

Fatal1ty ASRock Motherboard Series features Killer™ E2200 Intelligent Networking Platform, which delivers fast networking performance for time-sensitive UDP (User Datagram Protocol) based applications, such as online games and high-quality media streaming.

Lower Latency in Online Games

Latency

Killer LAN — **Low**

Lower is Better!

Other LAN — **High**

Automatic Gaming Traffic Prioritization

Gaming

Killer E2200 GAME NETWORKING

Other Tasks

Qualcomm Atheros Killer Network Manager

- Overview
- PC Monitor
- Applications
- Network
- Advanced

Applications
Visualize network usage and tune bandwidth to change how your applications access the Internet

Sort By: Alphabetical: A-Z   Show Running Only

- COM Surrogate
- Delta 2 Launcher (buildbot_wrkst_...)
- Gamma Plus
- Host Process for Windows Servic
- Host Process for Windows Servic
- Host Process for Windows Servic
- Local Security Authority Process
- NT Kernel & System
- Services and Controller app
- SpeedTestTool.exe
- Windows Media Player Network ...
- Windows Start-Up Application

Super Alloy Motherboard
Stable and Reliable

The extra large massive aluminum alloy heatsinks dramatically take away heat and cool down MOSFETs, chipsets.

XXL Aluminum Alloy Heatsink Design

Premium Alloy Choke

The new generation alloy chokes effectively increase up to 90% saturation current and feature a highly magnetic and heat resistant design, making the motherboard more efficient, stable and reliable.

Saturation Current

Premium Alloy Choke — **38A**

90% Better!

Ferrite Choke — **20A**

Nichicon's supreme 12K platinum capacitors! The industry's longest lifespan – 12,000 hours.*

* Tested under industry standard 105 degree Celsius ambient temperature.

Durability

12,000 hours* — ASRock's MB With Nichicon 12K Platinum Caps

20% Longer!

10,000 hours — Others' High-End MBs Caps

Nichicon 12K Platinum Caps

Sapphire Black PCB

Pure black PCB appearance. The new Sapphire Black PCB represents rock-solid quality and gives the motherboard a more mysterious touch.

The next generation NexFET MOSFETs provide lower Rds(on) 2.9 mΩ, delivering higher efficiency and lower temperature.
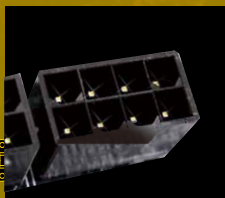
NexFET MOSFET

Power PAK — **HOT**   **Cool**

NexFET MOSFET for Memory Power

Gaming Armor
Built to Kill

CPU Power	Memory	VGA Card	Audio	Internet
Hi-Density Power Connector	**NexFET™ MOSFET**	**PCIe Power Connector**	**Purity Sound™ 2**	**Qualcomm® Atheros® Killer™ LAN**

CPU Power
Hi-Density Power Connector

Reducing 23% Power Loss and 22℃ Pin Header Temperature

Memory
NexFET™ MOSFET

The Next-Gen MOSFET Lower Rds(on) 2.9 mΩ Lower Temperature & Higher Efficiency

15µ Gold Contact in DIMM Slots

Providing Better Anti-Oxidation Protection

VGA Card
PCIe Power Connector

Providing More Juice & Stability for VGA cards

15µ Gold Contact in VGA PCIe Slot (PCIE2)

Providing Better Anti-Oxidation Protection

Audio
Purity Sound™ 2

Including 7.1 CH HD audio with Realtek ALC1150 audio codec, 115dB SNR DAC with Differential Amplifier and Nichicon Fine Gold audio caps that reduce noise level significantly and satisfy even the pickiest audiophiles.

Internet
Qualcomm® Atheros® Killer™ LAN

Killer E2200 GAME NETWORKING

FAST Networking Performance
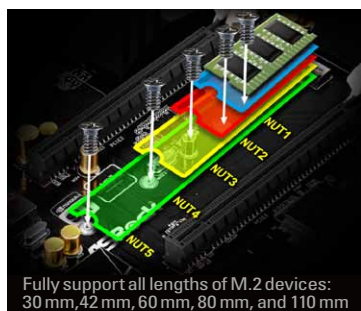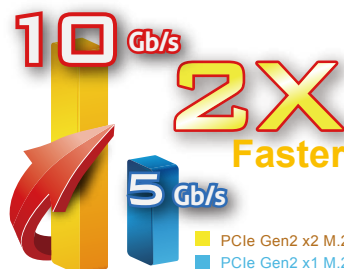
Cooling
XXL Aluminum Alloy Heatsink

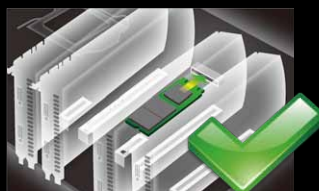The Extra Large Heatsinks Dramatically Take Away Heat & Cool Down MOSFETs, Chipsets

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M.2 (SATA3)

M.2 SOCKET

The onboard M.2 socket is a new interface for connecting Next Generation Form Factor (NGFF) solid state drives or other devices. ASRock supports M.2 SATA3 6.0 Gb/s modules and M.2 PCI Express modules up to Gen2 x2 10 Gb/s, which is 2X faster compared to other M.2 Gen2 x1 solutions that are limited to 5 Gb/s.
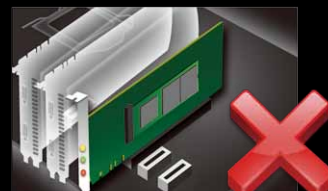
10 Gb/s 2X Faster 5 Gb/s

- ☐ PCIe Gen2 x2 M.2 Socket
- ☐ PCIe Gen2 x1 M.2 Socket

Fully support all lengths of M.2 devices: 30 mm, 42 mm, 60 mm, 80 mm, and 110 mm
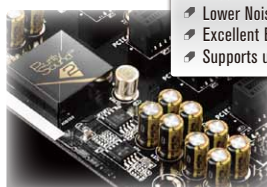
ASRock M.2 DESIGN V.S. OTHER M.2 DESIGN

Horizontal installation design prevents any interferences with discrete graphics cards and occupation of PCIe slots

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Purity Sound™ 2

Purity Sound™ 2 includes 7.1 CH HD audio with Realtek ALC1150 audio codec, 115dB SNR DAC with Differential Amplifier, cap less Direct Drive technology, EMI shielding cover, PCB isolate shielding and DTS Connect. As Nichicon audio capacitors are what every audiophile has been longing for on a PC, ASRock applied these high quality capacitors for Purity Sound™ 2.

Purity Sound™ 2 brings you:
- 🎵 115dB SNR
- 🎵 Lower Noise
- 🎵 Excellent Bass For All Headphones
- 🎵 Supports up to 600ohm Headphones

Noise Level
HIGH *Traditional Solid Caps*

LOW *Nichicon Fine Gold Series Audio Caps*

Key Master

Key Master consists of two major features, Sniper Key and Macro Key. It enhances your mouse and keyboard with customizable macros, sniper modes, key repeat rates and repeat delay.

Sniper Key
Use Sniper Key to shift the mouse speed when you're in sniper mode, it will greatly sharpen your accuracy.

Mouse Track

Without Sniper Key | With Sniper Key

Macro Key
Create your own set of keyboard hotkeys and macros with Macro Key to save the trouble.

XSplit Broadcaster is a desktop application designed to make your multimedia broadcasting, live-streaming and recording a lot easier and more fun. XSplit Gamecaster is a simplified version of XSplit Broadcaster. We're giving XSplit Broadcaster & XSplit Gamecaster 3-month premium license bundle for FREE! A US$ 24.95 value!

* XSplit is provided by a third party. Restriction may apply and the offer is subject to change, termination or discontinuation by the third party without prior notice. Please visit the website for further details: http://www.asrock.com/microsite/Fatal1ty/

Broadcast Platform + Broadcast Software = Broadcasting!

ASRock Cloud* technology makes your mobile devices connect to your PC seamlessly and supports multi devices for accessing File Explorer cloud service simultaneously! We offer a one-year subscription to Orbweb.ME Professional version, a personal cloud service which is $49.99 per year. It allows you to get connected with your PC's files, music, photos, and video clips remotely with tablets anytime, anywhere. Plus an additional one-month upgrade to Orbweb.ME Ultimate package with Remote Desktop function.

* OrbWeb ME is provided by a third party. Restriction may apply and the offer is subject to change, termination or discontinuation by the third party without prior notice. Please visit the website for further details: http://www.asrock.com/feature/cloud/index.html

Orbweb ME Professional
USD$ 49.99
1-year subscription
FREE

Fatal1ty Mouse Port

After plugging a USB mouse into the Fatal1ty Mouse Port and running F-Stream, gamers can choose their own preferred mouse polling rate from 125 Hz to 1000 Hz.

F-Stream

F-Stream is Fatal1ty's multi purpose software suite with a new interface, more new features and improved utilities, including OC Tweaker and a whole lot more.

Digi Power

By adopting digital Pulse-width modulation (PWM), the ASRock motherboard can provide CPU Vcore voltage more efficiently and smoothly.

SATA Express Connector

The SATA Express* interface provides PCIe Gen2 x2 (10Gb/s) data transfer speed. This motherboard offers the latest SATA Express connector to enthusiasts to enjoy the ultimate performance.

* Support to be announced.

HDD Saver Technology

There's a dedicated 4-pin HDD Saver Connector placed near the SATA ports. By connecting it to the HDDs, you can shut down or turn on the HDDs via software when needed. HDD Saver Technology secures more privacy, saves more energy, and extends HDD life.

SAVE PRIVACY   SAVE ENERGY   SAVE HDD LIFE

ASRock APP Shop

We provide various apps and support software for users to download. You can easily optimize your system and keep your motherboard up to date with ASRock APP Shop.